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THE SOLITAIRES OF SHASTA*

By WILLIAM LEON DAWSON

WITH FIVE PHOTOS BY THE AUTHOR

WHENEVER I recall those two magic weeks spent near timberline on Mount Shasta, I cannot be sure which image comes up first, whether the chaste menace of the eternal snows which crown the summit, the somber forest of the Shasta fir trees which girdles the mountain midway, or the gray ghostly shape of a bird which flits and vanishes by turn throughout that haunted forest. The snow-cap was a thing apart,—remote, incomparable, birdless; but the Shasta Fir (*Abies shastensis*), and the Townsend Solitaire (*Myiadeptes townsendi*) were paired entities, inseparable in the thought of a birdman. If the bird had elected to hide his nest in the ample draperies of blackbeard “moss” (the lichen, *Alectoria fremonti*), which clothed and disguised most of the trees, there would have been no occasion to write this history. A Ruby-crowned Kinglet, better advised, dared to tease us, daily, with his exulting song, and that right on the confines of Hardscramble Camp; for many wasted hours had taught us that his secret at least was secure in that mossy paradise. The guileless Solitaires, instead, placed their nests oftenest at the base of some giant of the forest, trusting to humility and chance. But if they took chances in the open, they did not publish their immediate whereabouts by unguarded song nor by fatuous visitations. Every nest discovered was the reward of diligent search, or else it was a gift, so earnestly desired that it was hailed as good fortune not to be despised because it was, for once, gratuitous.

At the time of our arrival at timberline, July 7, 1916, Solitaires were nesting, or had nested, at every lower level down to 5000 feet. In the yellow pine belt discreetly anxious mothers were supervising the education of hobbledheys who rather resented further attention. But the snows had lingered late that season. Moreover, they had been replenished by a heavy and very unseasonable downfall on the first day of the month. The birds which were accustomed to nesting at higher levels were crowding the retreating snows in their anxiety to begin the nesting season. In all probability many nests had been overwhelmed, so that thereafter we were really witnessing a second nesting season. At any rate, the birds continued in full song up to the time of our departure, July 19; whereas Dr. Merriam, who arrived on Shasta July 15, 1898, saw but six birds, and declared them to be “always silent”. Silent! Well, perhaps the future distinguished monographer of bears was even then attuning his ears to the music of *Ursus hoots*.

With this much by way of introduction, and because the writer has a theory that bird articles ought to write themselves (if the field work has been attended to), he is going to ask the liberty of quoting from his note-books, with only slight emendation and rearrangement, and so to present six separate sketches of Solitaires on Shasta.

V147/2-16 *Townsend Solitaire*; alt. 7200, July 8: Male heard singing in the tree-tops. The bird is evidently shifting about from place to place in a beautiful fir grove. His song is wierd, eccentric, and unstudied, as refreshing as it

*Contribution from the Museum of Comparative Oology..

is inconstant—scarcely excellent enough to have merited Newberry's encomium of "best", yet very gratifying to the ear,—and rare.

Bert [Mr. A. G. Vrooman, of Santa Cruz] had the good fortune to find the nest of a Townsend Solitaire 12 feet up in the heart of a rotten fir stump. All he had to go by was a bit of outcropping black moss, so he hit the stump a whack on general principles, and out flashed the bird. Since Bert had never even seen a Townsend Solitaire but once before in his life (in Trinity County, July 3, 1916), he was appropriately elated. He had, however, just been through a seance with another Solitaire about 100 yards away, and this, too, while he was passing a dead stump. The bird had appeared from the direction in which it had first been heard singing, and as it passed him it began to hover with slowly flutter-



Fig. 1. NESTING HAUNT OF TOWNSEND SOLITAIRE. POSITION OF NEST V148/3-16 IS INDICATED BY WHITE X.

ing wings, and with every appearance of solicitude. And this it did for a distance of a hundred yards, or until just before it lighted in a tree.

We have just visited the stub together. The bird flushed silently. We glanced hastily at the two eggs which the nest contained, then retired to a distance of thirty yards. Almost immediately the bird came back, so that we fear advanced incubation. The male presently came up also and sat silently, in plain sight, some fifty yards away. He scarcely moves and he says nothing, for *M. townsendi* is a very patient bird.

July 10: Returning to claim the eggs, we find the bird on, facing toward the exit. The eggs prove to be dead and, therefore, of quite an unknown age—

though one surmises the storm of the first of the month as the occasion of temporary desertion and consequent disaster. One of the eggs, moreover, has an ancient puncture, like a bill stab. The bird returned immediately after my first investigation, as she did also after I had taken the eggs. Quite daffy, you see! The heart wood of the stump proved to be so rotten that I could do nothing with it but tear it away, but I did save two neighboring chunks by way of local atmosphere. Nest composed chiefly of the blackbeard lichen (*Alectoria fremonti*) with a little ornamentation, upon the skirts, of the yellow-green lichen (*Evernia vulpina*). After I had removed the nest, both birds sat about, within twenty yards or so, and gave vent to the tiniest notes of complaint.

V148/4-16 *Townsend Solitaire, Hardscramble Camp (alt. 8000); July 10*: A Townsend Solitaire sings from a dead limb near the summit of a tall fir tree, not less than 150 feet above the ground. The song is broken and fragmentary, and is rendered in a matter-of-fact, passionless way which harmonizes well enough with the sedate bearing of the bird. Although it was a hot day, I could fancy that the sentry sang with redoubled vigor as he saw me poking and prying about old stumps and upturned roots. The joke is on me, and he knows it.

July 12: We have been regaled from time to time by Solitaire music proceeding from a point about 300 yards southwest of camp. Bert went down on Sunday, July 9, and was treated to a fluttering performance on the part of the male. He hunted diligently, but without result, while the male watched him silently from an elevated station. We returned to the charge together on Monday, but since we looked only for a stump nest we were unsuccessful. Hunting alone that afternoon in another locality, Bert found a nest, n/3, (to be reported later) *under the base of a tree*. With this clew Bert returned to the present prospect yesterday, determined to succeed. The male bird gave him no better light than before, so he set to work systematically to investigate the base of every tree in the neighborhood. At the end of two hours he flushed the bird from the downhill, or protected, side of a big Shasta fir, at least a hundred yards from the original station. The bird flushed and fluttered away like a gray ghost, and as silently. About 50 yards away Bert found what looked like a decoy nest, or abandoned claim, under the curving base of a tree. There was an abundance of fir twigs heaped about, and the rough outlines of a hollow, but no lining, save one chunk of blackbeard moss.

Today we are "trying her out" with a view to getting a picture of the sitting bird on her nest. She flushed very quickly at first, and required fifteen minutes and many feints to return. She flushed again as I leveled the Graflex at her, but she is back after a five minute interval. After another turn at settling and flushing, we watched the bird feint and settle. Almost immediately the male bird, whose presence we had not previously suspected, flew down to see that his mate was well placed, then instantly took himself off.

I succeed in snapping at 11 feet this time, but have a very poor show with the Ross lens. However, the light improves, as well as the disposition of my lady, and, to my amazement, I am able to get her with the Heliar, 8 ft., 7 ft., 6 ft.—all this not without many flushings and feintings. Finally, the sun shines full upon the critical spot,—5 ft., 4 ft., 3½ ft.—glorious! until the last plate is used up. Then I try the Premo with tripod. This bothers the birdie. She ventures back but is ill at ease and pops off again at the slightest excuse. It looks too much like a trap, especially when I come back to "work" it. A tube would have been the thing, but I am without one this year. Finally, in despair, I lie down by

the camera. The bird does come back at last, but she will not suffer any motion on my part. The light plays out and the game is off. The presence of the male, too, with his low creaks of solicitude has undoubtedly made the female more sensitive. The taking of the nest after all,—this is a heart-breaking matter; but Solitaires are more common than we are.

Nest a very frail, careless affair of scattered and spread sticks covering an area a foot square. Nest-hollow, carefully lined with grass obtained at some distance, 3 inches across by $1\frac{1}{2}$ deep.

The most important point to emphasize in the situation is the near presence of snowdrifts half encircling the tree under which the nest is placed, as, of course, the photographs show. The significance of this did not fully occur to me until in the afternoon Bert showed me the nest which is to be (D. V.) V149/3-16 T. S.



Fig. 2. NEST AND EGGS OF TOWNSEND SOLITAIRE; V148/4-16.

The bird flushed lightly from a situation almost exactly like that of V148/4-16, and then fell to bug-catching. In this pursuit she again and again *alighted upon the snow*, securing there, no doubt, benumbed or dead insects—a sort of *Leucosticta* of the lower levels. Snowbanks, then, are, perhaps, an agreeable feature of Solitaire environment. We spend the afternoon looking up Solitaire prospects, and hear three singing males, all believed to be new.

V149/3-16 *Townsend Solitaire*, alt. 6900 feet, July 13, 1916: Nest found Monday, July 10, left for egg complement; revisited yesterday, as mentioned. My hat is off to Mr. Vrooman for having made this location, for the crooked-based tree which gives the nest shelter is simply one of ten thousand which clothe the mountain; and the male does nothing more by his presence than to set one to looking anywhere within 200 yards. Nevertheless these exact conditions have to be met: shade, shelter, outlook, and the near presence of snow-banks. The sharp falling-away of the ground immediately below this tree, i. e., after the nesting

shelf is cleared, would seem to make it peculiarly acceptable. The composition, or rather the setting of the nest, even more than in case of *V148* suggests complete harmony with its surroundings. For, curiously enough, there are some fallen wisps or bunches of the yellow-green lichen at the base of nearly every tree hereabouts, and as likely as not a considerable admixture of the blackbeard moss. In searching, therefore, one sees dozens of spots which precisely resemble this one, nest and all.

The bird had just gone into shadow today as I made my appearance at 1:15 P. M. I have considerable time, therefore, to accustom her to the presence of the camera before the next full sunshine falls. The male sings a little in the offing just to let her know he is on the job. At my first approach the female allowed me to come within five feet, then dashing silently off and downward, fluttered ostentatiously over the ground. I retired while she had a bug or two, exchanged confidences with her solicitous mate, made a feint or two and was back, within five minutes. At my second approach I got within three feet before she flushed. Then she flew silently about 15 feet before she checked, and began to fluttter laboriously, with tail depressed and wings held high. I retired and she was back, by direct descent from an overhead limb, within two minutes. Thereafter follows nearly an hour of getting acquainted—so successful, indeed, that I am miserable over the prospect of either horn of the dilemma, taking or leaving the eggs. I make advances quite professionally, but my heart does not go out, and my methods are both harsh and hasty. Nevertheless, when the shadow does clear at three o'clock, I have the bird tamed so that I can go right up with the Graflex and *bang away at two feet*. This I did *ad nauseam*, and the bird never stirred. But when I brought up the Premo and tripod and stood it over her, then there was trouble. She would stand the camera, but she wouldn't let me put out my hand to snap it. But she was plucky! Back and forth she went, back and forth,—till, finally, I took charge of the situation and photographed the eggs. Then I put my photographic apparatus up, intending to take the eggs in spite of all conscience. But the way that bird recovered those eggs would have melted the heart of a rhinoceros. I photographed her some more, then sat down to write these notes. The eggs are exceptionally large and handsome with heavy red spotting. The nest would be a prize in itself, composed, as it is, chiefly of blackbeard lichen, whose skirts overlie heavy clumps of *Evernia* lichen, like lace over silk. The nesting hollow is, of course, of fine dry grass.

During our prolonged seance we were visited by several curious birds, notably a pair of Red-breasted Nuthatches. Once I found my Graflex camera unwittingly pointed at a nuthatch not over six feet away; but alas! I had on the Ross lens, whose minimum range is 11 feet.

215/3-16 Townsend Solitaire; Squaw Creek; alt. 7800 feet; July 14, 1916: At the first sound of a singing Solitaire, I set to work to look for nests at the foot of the trees. Almost immediately I found one tucked away in a cranny under the base of a giant Shasta fir, so completely concealed, indeed, that not a twig of its fourteen-inch spread could be seen from a point straight above. The twigs were in perfect condition, but the disarray of the grass lining, as well as the sodden condition of the only bit of moss, blackbeard lichen, which the structure boasted, apprised one that he was viewing an old nest, presumably last year's.

The hillside here carries a magnificent forest of Shasta firs, each with its curve-kneed base and its lichen-covered shelf on the under side. The ground was, also, sharply sloping and, although a west exposure, is still half covered with

snow. I set to work in good earnest examining the bases, and had accomplished nothing in an hour's work, so sat down on a rock for a cold bite of lunch, determined to see if I could get any lead. I did see a bird flit about 75 yards up the hill, but it disappeared against, or behind, a tree bole and I saw nothing more of it. These birds have a marvelous way of slipping around unobserved. The next I knew a male was singing overhead 125 feet up. By and by I had the rare pleasure of seeing and hearing the ecstatic song flight of the male. From a height well above the treetops and 300 feet above the earth, he descended, slowly, in a great spiral, with fluttering wings. More than ever he looked like a Mockingbird, except that his action did not savor of the grotesque. The song torrent was light and sprightly in character, reminding me more of the breathless rhapsody of the Lark Sparrow than of the measured accents of the Thrush. This



Fig. 3. NEST AND EGGS OF TOWNSEND SOLITAIRE; V149/3-16.

exercise over, the bird descended through the trees and allowed himself to be seen on several occasions in an open bit about a hundred yards down the hill. Several times he visited the ground, and twice I saw another bird of the same species get up. Once there was quite a spirited passage, a bug and a hug as near as I could make out, after which the mysterious second bird disappeared by a dive to earth. I'm on to their game this time, I guess.

With quite a complacent feeling I worked my way down to the scene after lunch. In my confidence I even stopped to take off my sopping boots and dry them, preparatory to "landing" the nest. The male improved the occasion by betraying his anxiety in various ways—first by little sotto voce snatches of song intended for the ear of the sitting female, and then by that weird pendulum creak, whose qualities I have so often remarked. This sound is really indescribable, yet it invites renewed effort at comparison. It has been called a "bell

note", but it is more nearly a bell-like croak, a ghostly, ventriloquistic, droning sound, a rusty hinge creaking in the wind, a voice of conscience coming from no whither and heard within.

But the bird was not to be found at the base of a certain preappointed tree. Nor yet was it found with the nearest neighbors. What could have become of it? A quickened and then an anxious search followed. But there were no more leadings from the birds. Frantically I examined every tree base within a hundred yards. Nothing doing. This repeated loss of time was getting serious. Fer- vently I prayed, "Oh, Lord, let me succeed just this once". I half believed the answer would come, but I had some misgivings as touching the efficacy of the *bird's* prayer.

Well, before I went back to camp I would toil up the hill and see if there was anything doing on the hillside, where I had seen the bird disappear. Cunning hidey holes there were at the bases of the trees, but no nest. A bit of moss which protruded from a tree-trunk, a noble bole $3\frac{1}{2}$ feet in diameter, a little below where the regular coating of *Evernia* commenced, attracted my eye. It seemed to come from a hole rather than from the surface, as the other moss did. I levelled the binoculars. There was quite a bunch of moss in the hole, and behind the moss a gray head and a—yes, I am sure that is a glittering *eye*. Why— why, that's the tree where my bird disappeared! *It flew straight into its nest and I never knew it.* But whoever would have thought of such a thing? An un- broken shaft of a sturdy live tree, forty feet to the lowest limb, and clad, as all proper fir trees are, from about twenty feet up—above the snow line—with a shaggy coating of *Evernia* lichen. Yet here was this hole as sharp cut as the print of a giant spear-thrust, eight feet up from the ground.

Well, the bird flushed when I was within twenty feet and I never saw her again until the nest was gathered (perhaps I didn't look very hard; I wasn't in a sentimental mood). The hole was ten inches deep both horizontally and verti- cally, but was only four inches wide in the middle passage. The bird had shaped her architecture admirably to the accommodations and even sat with tail pointed in—quite a luxury for cramped quarters. Nesting hollow 3 inches across and 2 deep, grass and pine needles with twigs and abundant moss (*Evernia* lichen) for the porch and filling. Bird returned repeatedly and silently after nest was removed, but there was no further demonstration either on her part or that of the male. Eggs fresh as paint!

218/4-16 *Townsend Solitaire*; alt. 8200; July 17: You never know your luck! Also, they nest *anywhere*. I had eaten my Monday lunch in a sunny clearing, which had once been swept by a landslide, but is now being re-covered with scattered saplings. After that I set out to cross the remainder of the clear- ing, when I spied a *Townsend Solitaire* sitting in the top of a small sapling about fifty feet from the edge of the woods. He was almost immediately joined by a bird which seemed to come up out of the open (dwarf) manzanita. There was a feeding scene, with some evidence of tender solicitude, whereupon both ad- journed to the woods. I followed, after an interval, and as I entered the somber depths a bird shot back past me into the open, and disappeared in a flash into the central depressed portion of the manzanita patch. I followed again in some be- wilderment, looked carefully at the bases of the few saplings in range, peeked under a few stones, and headed for another, for no particular reason, since it was one of hundreds. But out from under this one flushed Mistress Myadestes, and the secret was out,—218/4-16 *Townsend Solitaire*, right out in the open of

a sunny hillside. The nest is a very slimy affair composed entirely of needles of the white-bark pine, with a front porch, or skirting, of pine and fir twigs. The needles have no coherence, and merely line thickly a hollow made in the soil under the full protection of a rock, and behind a partial screen of dwarf manzanita (*Arctostaphylos nevadensis*). Hollow of nest 4 inches across by 2 deep. Skirt, which was saved and wrapped separately, about 4 inches wide. Female only flitted back and forth restlessly and uncomplainingly, alighting for the most part on one and another of the tiny fir saplings. Eggs about half incubated.

V150/3-16 *Townsend Solitaire*; alt. 7500; July 19, 1916: Bert had made the location six days ago, Thursday, July 13, but the nest at that time had no lining,



Fig. 4. TOWNSEND SOLITAIRE ON NEST AT BASE OF SHASTA FIR.

and he was skeptical of results in the time allowed. The nest was a straight find on his part, on the basis of birds seen in the neighborhood and manifestation of desire for mating on the part of the female. Nest under rock on sloping hillside in deep woods. Shasta firs up to five feet in diameter in immediate neighborhood and snow all around, the nearest bank fifteen feet away.

As we approached, this evening at six, the bird was sitting tightly, so we suppose the set to be complete. Certainly this is quick work from a nest without a vestige of grass six days ago! Nest in triangular, receding cranny, with earth floor ten inches deep under cover, six inches wide at middle of nest. Nest proper $3\frac{1}{2}$ inches wide; $1\frac{3}{4}$ deep. Twigs covered with blackbeard moss for skirt, some

grass for lining. Bird gave the *dong* or *creak* note after we had taken the nest. Male afterwards sang snatches of song in the distance, but neither put in an appearance.

This makes the sixth set of Townsend Solitaire which we have taken in ten days. It is altogether probable that this species is the commonest and best distributed in the Shasta fir belt and the mixed belt immediately below. If we reckon the belt at three miles wide and fifty long, and allow for each pair of birds an area one-quarter of a mile square, we have fifteen hundred as the Solitaire population of Shasta, a figure I believe to be well within the mark.

Mr. Vrooman was particularly successful in finding old nests, as well as



Fig. 5. NESTING SITE IN DWARF MANZANITA. LOCATION OF NEST 218/4-16 IS INDICATED BY WHITE X.

new. He showed me another ancient relic in a rotten stump three feet up, and told me of four which he had found in upturned roots of fallen trees. Besides this he showed me an abandoned claim in a cranny formed by a broken but not completely severed tree, where the birds had deposited a few twigs, a bit of moss and several blades of grass. The evidence was scanty but sufficient. But also the cause of dissatisfaction was manifest, for the quarters were quite too narrow.

Santa-Barbara, August 4, 1916: Having still to blow the eggs of V150/3-16 T. S., I pause to note exact colorings. In ground color the three eggs represent the two types of coloration spoken of by Grinnell in his San Bernardino Re-

port, namely, the white with palest possible blue-gray tinge, and the definitely light blue type. In this set one egg appears almost pinkish as to ground, by reason of the diffusion of red markings, and the probable warming effect of the contents. The more pronounced type is of the palest niagara green; while the markings of both are of ochre red and prussian red.

These six sets of eggs reposing in nests "taken with the bloom on", now occupy an entire drawer in the collection of the Museum of Comparative Oology. Only one of those who gaze upon them is able to recall a flood of delightful memories (Bert alas! is exiled at Santa Cruz); but with these authoritative trophies for a text the Director will be able to point out to hundreds of others something of the "meaning of things", and to fill the minds of strangers with a sharp unrest until they too have heard the Solitaire sing on Shasta.

Santa Barbara, California, December 1, 1918.

NESTING OF THE SHORT-EARED OWL IN WESTERN WASHINGTON

By E. A. KITCHIN

WITH FOUR PHOTOS BY E. A. KITCHIN AND J. H. BOWLES

IT HAS heretofore been an unsettled subject, though much discussed among the bird men of this vicinity—that of the local nesting of the Short-eared Owl (*Asio flammeus*). Though the birds are common in the fall and winter, no records had been established of their breeding here.

Our Tacoma tide-flats cover several square miles of territory. Through the center runs a road that acts as a dyke, keeping out the tide that at one time covered nearly all this region, especially in the winter when the highest tides occur. Deep sloughs that twist and turn, intersect this whole section and act as channels for the waters of the incoming and outgoing tides. In the winter the Short-eared Owls are generally flushed from the edges of these sloughs where they hide most of the day, under some over-hanging grass or weeds.

Judging from various descriptions of nesting locations east of the Cascades, the proper places to search seemed to be where the grass or cover was long enough to afford good concealment for the large clutch of white eggs. I knew a sixty-acre tract on our flats answering this description, lying well above the summer tides. Last year I worked back and forth over this ground, using up several precious Sundays, but failed to locate a nest or even to flush a bird; and were it not for the fact that on one certain afternoon I saw two pairs of owls skimming back and forth in search of food, I would not have tried again. Firmly convinced that they did not use this heavily grassed section, I resolved this year to try the edges of the sloughs, their habitation in the winter months, the result being that two nests were found and photographs and records made.

My first effort this year (1918) was on May 6. Securing a stick about eight feet long, I traveled up the side of one slough and then down the other, keeping the length of the stick from the edge, and after about two hours of this was rewarded by flushing the owl from her "nest and four". When she jumped she scattered three of the eggs out of the nest but none was broken. The nest was placed in a very open position and the eggs could be seen sixty feet away. A